CLAIMS:

1. A method for multi-dimensional color transformation comprising:

(a) generating a multi-dimensional color transformation for transformation of a source image to a destination image; and

(b) constraining the multi-dimensional color transformation to prevent removal of selected color image data present in the source image.

2. The method of claim 1, wherein the multi-dimensional color transformation is configured based on the constraints imposed in step (b).

3. The method of claim 1, wherein step (b) includes constraining the multi-dimensional color transformation to prevent removal of selected colorants present at corresponding dots in the source image.

4. The method of claim 1, wherein step (b) includes constraining the multi-dimensional color transformation to prevent removal of black colorant present at corresponding dots in the source image.

5. The method of claim 1, wherein step (b) includes constraining the multi-dimensional color transformation to prevent removal of one or more chromatic colorants present at corresponding dots in the source image.

6. The method of claim 1, further comprising:

(c) constraining the multi-dimensional color transformation to prevent introduction of selected color image data not present in the source image.

7. The method of claim 6, wherein step (c) includes constraining the multi-dimensional color transformation to prevent addition of selected colorants not present at corresponding dots in the source image.

8. The method of claim 6, wherein step (c) includes constraining the multi-dimensional color transformation to prevent addition of black colorant not present at corresponding dots in the source image.

9. The method of claim 6, wherein step (c) includes constraining the multi-dimensional color transformation to prevent addition of one or more chromatic colorants not present at corresponding dots in the source image.

10. The method of claim 6, wherein step (c) includes constraining the multi-dimensional color transformation to prevent addition of chromatic colorants for black-only dots in the source image.

11. The method of claim 6, further comprising constraining the multi-dimensional color transformation in at least one of steps (b) and (c) based at least in part on constraints specified by a user.

12. The method of claim 1, wherein each of the source and destination images is defined by cyan, magenta, yellow, and black (CMYK) colorants.

13. A method for multi-dimensional color transformation comprising:

(a) generating a multi-dimensional color transformation for transformation of a source image to a destination image; and

(b) constraining the multi-dimensional color transformation to prevent introduction of selected color image data not present in the source image.

14. The method of claim 13, wherein the multi-dimensional color transformation is configured based on the constraints imposed in step (b).

15. The method of claim 13, wherein step (b) includes constraining the multi-dimensional color transformation to prevent addition of selected colorants not present at corresponding dots in the source image.

16. The method of claim 13, wherein step (b) includes constraining the multi-dimensional color transformation to prevent addition of black colorant not present at corresponding dots in the source image.

17. The method of claim 13, wherein step (b) includes constraining the multi-dimensional color transformation to prevent addition of one or more chromatic colorants not present at corresponding dots in the source image.

18. The method of claim 13, wherein step (b) includes constraining the multi-dimensional color transformation to prevent addition of chromatic colorants for black-only dots in the source image.

19. The method of claim 13, wherein each of the source and destination images is defined by cyan, magenta, yellow, and black (CMYK) colorants.

20. A system for multi-dimensional color transformation comprising:

a processor that generates a multi-dimensional color transformation for transformation of a source image to a destination image; and

a memory that stores constraints,

wherein the processor is programmed to apply the constraints to constrain the multi-dimensional color transformation to prevent removal of selected color image data present in the source image.

21. The system of claim 20, wherein the multi-dimensional color transformation is configured based on the constraints applied by the processor.

22. The system of claim 20, wherein the processor constrains the multi-dimensional color transformation to prevent removal of selected colorants present at corresponding dots in the source image.

23. The system of claim 20, wherein the processor constrains the multi-dimensional color transformation to prevent removal of black colorant present at corresponding dots in the source image.

24. The system of claim 20, wherein the processor constrains the multi-dimensional color transformation to prevent removal of one or more chromatic colorants present at corresponding dots in the source image.

25. The system of claim 20, wherein the processor is further programmed to constrain the multi-dimensional color transformation to prevent introduction of selected color image data not present in the source image.

26. The system of claim 25, wherein the processor constrains the multi-dimensional color transformation to prevent addition of selected colorants not present at corresponding dots in the source image.

27. The system of claim 25, wherein the processor constrains the multi-dimensional color transformation to prevent addition of black colorant not present at corresponding dots in the source image.

28. The system of claim 25, wherein the processor constrains the multi-dimensional color transformation to prevent addition of one or more chromatic colorants not present at corresponding dots in the source image.

29. The system of claim 25, wherein the processor constrains the multi-dimensional color transformation to prevent addition of chromatic colorants for black-only dots in the source image.

30. The system of claim 20, wherein each of the source and destination images is defined by cyan, magenta, yellow, and black (CMYK) colorants.

31. A system for multi-dimensional color transformation comprising:

a processor that generates a multi-dimensional color transformation for transformation of a source image to a destination image; and

a memory that stores constraints,

wherein the processor is programmed to apply the constraints to constrain the multi-dimensional color transformation to prevent introduction of selected color image data not present in the source image.

32. The system of claim 31, wherein the multi-dimensional color transformation is configured based on the constraints applied by the processor.

33. The system of claim 31, wherein the processor constrains the multi-dimensional color transformation to prevent addition of selected colorants not present at corresponding dots in the source image.

34. The system of claim 31, wherein the processor constrains the multi-dimensional color transformation to prevent addition of black colorant not present at corresponding dots in the source image.

35. The system of claim 31, wherein the processor constrains the multi-dimensional color transformation to prevent addition of one or more chromatic colorants not present at corresponding dots in the source image.

36. The system of claim 31, wherein the processor constrains the multi-dimensional color transformation to prevent addition of chromatic colorants for black-only dots in the source image.

37. The system of claim 31, wherein each of the source and destination images is defined by cyan, magenta, yellow, and black (CMYK) colorants.

38. A computer-readable medium containing program code that when executed by a processor:

(a) generates a multi-dimensional color transformation for transformation of a source image to a destination image; and

(b) constrains the multi-dimensional color transformation to prevent removal of selected color image data present in the source image.

39. The computer-readable medium of claim 38, wherein the multi-dimensional color transformation is configured based on the constraints imposed in step (b).

40. The computer-readable medium of claim 38, wherein step (b) includes constraining the multi-dimensional color transformation to prevent removal of selected colorants present at corresponding dots in the source image.

41. The computer-readable medium of claim 38, wherein step (b) includes constraining the multi-dimensional color transformation to prevent removal of black colorant present at corresponding dots in the source image.

42. The method of claim 38, wherein step (b) includes constraining the multi-dimensional color transformation to prevent removal of one or more chromatic colorants present at corresponding dots in the source image.

43. The computer-readable medium of claim 38, wherein the program code is configured such that, when executed, the processor:

(c) constrains the multi-dimensional color transformation to prevent introduction of selected color image data not present in the source image.

44. The computer-readable medium of claim 43, wherein step (c) includes constraining the multi-dimensional color transformation to prevent addition of selected colorants not present at corresponding dots in the source image.

45. The computer-readable medium of claim 43, wherein step (c) includes constraining the multi-dimensional color transformation to prevent addition of black colorant not present at corresponding dots in the source image.

46. The computer-readable medium of claim 43, wherein step (c) includes constraining the multi-dimensional color transformation to prevent addition of one or more chromatic colorants not present at corresponding dots in the source image.

47. The computer-readable medium of claim 43, wherein step (c) includes constraining the multi-dimensional color transformation to prevent addition of chromatic colorants for black-only dots in the source image.

48. The computer-readable medium of claim 43, wherein the program code is configured such that, when executed, the processor constrains the multi-dimensional color transformation in at least one of steps (b) and (c) based at least in part on constraints specified by a user.

49. The computer-readable medium of claim 38, wherein each of the source and destination images is defined by cyan, magenta, yellow, and black (CMYK) colorants.

50. A computer-readable medium containing program code that when executed by a processor:

(a) generates a multi-dimensional color transformation for transformation of a source image to a destination image; and

(b) constrains the multi-dimensional color transformation to prevent introduction of selected color image data not present in the source image.

51. The computer-readable medium of claim 50, wherein the multi-dimensional color transformation is configured based on the constraints imposed in step (b).

52. The computer-readable medium of claim 50, wherein step (b) includes constraining the multi-dimensional color transformation to prevent addition of selected colorants not present at corresponding dots in the source image.

53. The computer-readable medium of claim 50, wherein step (b) includes constraining the multi-dimensional color transformation to prevent addition of black colorant not present at corresponding dots in the source image.

54. The computer-readable medium of claim 50, wherein step (b) includes constraining the multi-dimensional color transformation to prevent addition of one or more chromatic colorants not present at corresponding dots in the source image.

55. The computer-readable medium of claim 50, wherein step (b) includes constraining the multi-dimensional color transformation to prevent addition of chromatic colorants for black-only dots in the source image.

56. The computer-readable medium of claim 50, wherein each of the source and destination images is defined by cyan, magenta, yellow, and black (CMYK) colorants.

57. A method for multi-dimensional color transformation comprising:

generating a multi-dimensional color transformation for transformation of first color image data for a source device to second color image data for a destination device; and

applying constraints to the multi-dimensional color transformation to improve halftone dot integrity between the first color image data and the second color image data.

58. The computer-readable medium of claim 57, wherein the multi-dimensional color transformation is configured based on the constraints.